

Class: VI
Subject: Chemistry
Topic: Sorting materials into groups
No. of Questions: 20

1. Why do we need to group materials?

Ans: Dividing materials into groups makes it easy to study their properties. It also helps to observe any pattern in these properties. For example: by placing similar types of objects together, we can locate them easily.

2. Name five objects which can be made from wood.

Ans:

1. Chair
2. Table
3. Plough,
4. Bullock cart and its wheels
5. Door

3. Classify the following fibres as natural or synthetic : nylon, wool, cotton, silk, polyester, jute

Ans: Fibres that are obtained from nature, i.e., from plants and animals are called natural fibres and those made by humans by chemical methods are known as synthetic fibres, wool and silk are obtained from animals and cotton and jute are obtained from plants. Hence, they are natural fibres, nylon and polyester on the other hand are prepared artificially and are therefore synthetic fibres.

4. Select those objects from the following which shine: glass bowl, plastic toy, steel spoon, cotton shirt

Ans: Glass bowl and steel spoon

5. State whether the statements given below are true or false.

- (i) Stone is transparent, while glass is opaque.
- (ii) A notebook has lustre while eraser does not.
- (iii) Chalk dissolves in water.
- (iv) A piece of wood floats on water.
- (v) Sugar does not dissolve in water.
- (vi) Oil mixes with water.
- (vii) Sand settles down in water.
- (viii) Vinegar dissolves in water.

Ans:

- (i) Stone is transparent, while glass is opaque. (False)
- (ii) A notebook has lustre while eraser does not. (False)
- (iii) Chalk dissolves in water. (False)
- (iv) A piece of wood floats on water. (True)
- (v) Sugar does not dissolve in water. (False)
- (vi) Oil mixes with water. (False)
- (vii) Sand settle down in water. (True)
- (viii) Vinegar dissolves in water. (True)

6. What is the difference between soft and hard material?

Ans: Soft materials are those which can be compressed or scratched easily.

7. Given below are the names of some objects and materials: Water, basket ball, orange, sugar, globe, apple, and earthen pitcher Group them as:

- (a) Round shaped and other shapes
- (b) Eatables and non-eatables

Ans: (a) Round shaped: basketball, orange, globe, earthen pitcher.

(b) Other shapes: water, sugar

(c) Eatables: water, orange, sugar, apple

(d) Non-eatables: basketball, globe, earthen pitcher

8. Why some materials lose their shine and appear dull?

Ans: Some materials often lose their shine and appear dull because of the action of air and moisture on them.

9. List all items known to you that float on water. Check and see if they will float on oil or kerosene.

Ans: some items that float on water are listed below:

1. Plastic bottle
2. Piece of paper
3. Piece of sponge
4. Piece of thermocol
5. Wood
6. Bamboo
7. Plastic ball
8. Cork

However, none of these items float on oil or kerosene.

10. What types of substances are soluble in water? Give example.

Ans: Substances that completely disappear or dissolve in water are soluble in water. For example-salt, sugar etc.

11. Why do we need to separate different components of a mixture? Give two examples.

Ans: Different components of a mixture are separated in order to either separate the unrequired components from a mixture or sometimes, to separate more than one useful components from a mixture.

For example, grain purchased from shops can contain several impurities such as pieces of stone, husk, broken grains, etc. Thus, grain is separated from these impurities to make it edible.

Similarly, after preparing tea, we strain it to remove the used tea leaves from tea.

12. What type of substances is called translucent?

Ans: The materials through which objects can be seen but not clearly are known as translucent. For example-oily patch on paper.

13. What is winnowing? Where is it used?

Ans: Winnowing is the process of separation of the heavier components from the lighter components of a mixture by wind or by blowing air. It is generally used by farmers to separate the lighter impurities such as husk particles from the heavier grains.

14. Classify the following as transparent or translucent or opaque material :
Cardboard, glass, water, oily paper, wood, stone, metal

Ans: Transparent –glass, water.
Translucent-oily paper
Opaque-cardboard, wood, stone, metal.

15. How will you separate husk or dirt particles from a given sample of pulses before cooking?

Ans: The dirt particles that are present in the pulses are removed by washing the latter with water. Being heavier, the pulses settle down, while the dirt particles being lighter keep floating in water. This process is called by the method of decantation, leaving the pulses at the bottom.

16. What do you mean by the term ‘transparent’?

Ans: Those substances or material, through which things can be seen are called transparent. For example-water, glass etc.

17. Is it possible to separate sugar mixed with wheat flour? If yes, how will you do it?

Ans: yes, it is possible to separate a mixture of sugar and wheat flour. This can be done by the process of sieving. If the mixture of sugar and wheat flour is allowed to pass through a sieve, then the fine wheat flour particles would pass through the sieve, the sugar particles would be retained by the sieve.

18. Match the following:

| A | B |
|--------------|------------|
| 1. Newspaper | a. Wood |
| 2. Chair | b. Paper |
| 3. Shoes | c. Wax |
| 4. Nail | d. Leather |
| 5. Candle | e. Metal |

Ans: 1-B, 2-A, 3-D, 4-E, 5-C

19. How would you obtain clear water from a sample of muddy water?

Ans: Clear water can be obtained from a sample of muddy water by the method of filtration . In the method, the sample of muddy water is poured through a cloth having fine pores or thorough a filter paper. Water will pass through the filtering medium, leaving behind the mud.

20. Find the odd one out:

- a. Iron, wood, nail, cotton.
- b. Sugar, salt, sand, milk
- c. Copper, wood, aluminium, gold.
- d. Table, chair, coin, bed

Ans: (a) Cotton, (b) sand, (c) wood, (d) coin.

askITians